Abstract of the Disclosure

[0018] An optical fiber suitable to support single mode optical transmission at longer wavelengths (e.g., 1550 nm) is formed to comprise a pure silica core region and a "down doped" cladding layer. The core region is defined as having a diameter d and the cladding layer is defined has having an outer diameter D. In accordance with the present invention, single mode propagation will be supported when $D/d > 8.5$, and is preferably in the range of 9 - 10.